

WHAT IS CLAIMED IS:

1. A group III nitride compound semiconductor device
of a successively laminated structure comprising:
5 a substrate;
a buffer layer;
a first layer formed of $In_xGa_{1-x}N$ ($0 < x < 1$); and
a second layer formed of $In_yGa_{1-y}N$ ($0 < y < 1$, $y \neq x$).

2. A group III nitride compound semiconductor device
10 according to claim 1, wherein a composition ratio of In in said
first layer is changed continuously or intermittently in a
direction toward the second layer side from the buffer layer
side so that a composition of said first layer in a face brought
into contact with said second layer becomes substantially equal
15 to a composition of said second layer.

3. A group III nitride compound semiconductor device
of a successively laminated structure comprising:
20 a substrate;
a buffer layer;
a first layer formed of $Al_aGa_bIn_{1-a-b}N$ ($0 < a < 1$, $0 < b < 1$,
 $a+b < 1$); and
a second layer formed of $In_yGa_{1-y}N$ ($0 < y < 1$).

25 4. A group III nitride compound semiconductor device
according to claim 3, wherein a composition ratio of Al and In
in said first layer is changed continuously or intermittently
in a direction toward the second layer side from the buffer layer

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side so that a lattice constant of said first layer in a face brought into contact with said second layer becomes substantially equal to a lattice constant of said second layer.

5 5. A group III nitride compound semiconductor device according to claim 3, wherein a composition ratio of Al and In in said first layer is changed continuously or intermittently in a direction toward the second layer side from the buffer layer side so that a band gap of said first layer in the face brought 10 into contact with said second layer becomes wider than a band gap of said second layer.

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6. A group III nitride compound semiconductor device according to claim 4, wherein the composition ratio of Al and In in said first layer is changed continuously or intermittently 15 in the direction toward the second layer side from the buffer layer side so that a band gap of said first layer in a face brought into contact with said second layer becomes wider than a band gap of said second layer.

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